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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/326,244	06/04/1999	DARYL W. HOCHMAN	48000.1002U	3962

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EXAMINER

MORAN, MARJORIE A

ART UNIT PAPER NUMBER

1631

DATE MAILED: 04/08/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/326,244

Applicant(s)

HOCHMAN, DARYL W.

Examiner

marjorie A. Moran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 2-11 and 17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 2-11 and 17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. All rejections and objections not repeated below are hereby withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over POOT et al (US 6,291,203 B1).

Applicant's arguments filed 1/22/02 have been fully considered but they are not persuasive. In response to applicant's argument that POOT does not teach a sample population which is an organ culture or intact organism, it is noted that the yeast cells taught by POOT (col. 8, lines 38-41) are intact organisms.

Claim 17 recites a method of identifying optical contrast enhancing agents for use in enhancing the sensitivity of optical detection of a biological material by maintaining a sample population in an organ culture system or an intact organism, exposing the sample population to a candidate agent, acquiring test data relating to one or more optical properties of the sample population, and comparing the test data to comparison data, whereby a change in the optical property or properties identify the agent as one which enhances sensitivity of optical detection. Claim 2 limits the method

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to one wherein multiple data sets are acquired from multiple selected spatial locations in the sample population. Claim 3 limits the method to one wherein the sample population is exposed to a physiological challenge before acquiring test data. Claim 4 limits the method to one wherein control data is acquired before exposing the sample population to the test agent. Claim 5 limits the method to compare the test data to the control data of claim 4. Claim 6 limits the comparison data of the method of claim 17 to be from empirically derived controls. Claim 7 limits the physiological challenge of claim 3 to one from a specific list. Claim 8 limits the method to one wherein multiple sample populations are maintained in vitro. Claim 9 limits the optical property to a specific type. Claim 11 limits the sample population to a viable, intact organism.

POOT teaches a method of identifying cyanine dyes which are useful in selectively staining mitochondria (i.e. which result increased contrast of mitochondrial staining as compared to other cellular organelles; col. 3, lines 51-52 and col. 7, line 58-col. 8, line 32). POOT teaches comparison of cells/mitochondria stained with his dyes to cells/organelles stained with Rhodamine 123 (col. 19, lines 15-61) and thereby identifies his cyanine dye as ones which increase contrast of mitochondrial staining in cells. POOT teaches that the cells in his method may be cultured cells, cell lines, cells in tissue, or yeast cells (col. 8, lines 34-41). It is noted that yeast are intact organisms. POOT also teaches treatment of his cells with various compounds (test agents or drugs) before addition of his cyanine dyes (col. 8, line 61-col. 9, line 8). POOT teaches comparison of cells with dye added to cells without dye added (empirical controls) to assess the effect of staining of mitochondria (optical activity of the dye; col. 9, lines 8-

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15). POOT teaches that his stain may be detected by quantifying fluorescence (col. 11, lines 52-60). Fluorescence is a specialized form of absorption, therefore the examiner interprets quantification of fluorescence to be measurement of absorption. POOT also teaches that cells may be detected and isolated based on their fluorescence using a flow cytometer (col. 11, lines 55-60 and col. 21, lines 25-52). POOT does not specifically teach use of yeast cells as his sample population.

It would have been obvious to one of ordinary skill in the art at the time of invention to have identified dyes which enhance staining and/or contrast of mitochondria in yeast, as suggested by the teachings of POOT, where the motivation would have been to use any cells which are known to contain mitochondria, as taught by POOT (col. 8, lines 34-41).

Conclusion

Claims 2-11 and 17 are rejected.

The prior art made of record and not relied upon which is considered pertinent to applicant's disclosure is O'BRIEN et al. (Journal of Dental Research (1989), vol. 68 (2), pages 157-158). O'BRIEN teaches a method of identifying an optical contrast enhancing agent for increasing the sensitivity of optical detection of a biological material in an organ (tooth) by comparing optical data acquired from teeth (multiple samples) after exposure to a test agent and a candidate (dye) to optical data from controls.

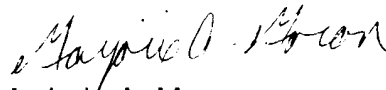
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marjorie A. Moran whose telephone number is (703)

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305-2363. The examiner can normally be reached on Monday to Friday, 7:30 am to 4 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (703) 308-4028. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to a patent analyst, Tina Plunkett, whose telephone number is (703) 305-3524.


Marjorie A. Moran
Examiner
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April 4, 2002